

last drift sheet, and the fossil vertebrates found in them belong to the close of the Later Pleistocene.

Of the genera missing from the late Wisconsin fauna, the ground-sloths, the horses, the tapirs, various bison, and saber-tooth tigers, some had survived the Kansan glacial stage. The species of the genera thus surviving are usually relatively few and the stages during which they became extinct, usually uncertain. *Myiodon*, *Bison antiquus*, and *B. latifrons*, and the tapirs dropped out probably during the Sangamon or soon after; the few horses apparently perished before or during the Wisconsin glacial stage. It seems, therefore, inexpedient to divide the post-Kansan vertebrates into two or more faunas.

PALEONTOLOGY.—*The genera Pseudotextularia and Guembelina.*
JOSEPH A. CUSHMAN, Sharon, Massachusetts.

The genera *Pseudotextularia* and *Guembelina* described from Europe also occur in the Upper Cretaceous of Mexico, and as the two are confused in Egger's work on the Foraminifera of the Cretaceous published in 1899¹ a few notes may help other workers on the foraminifera.

Pseudotextularia Rzehak, 1886

This genus was erected by Rzehak in 1886.² Later, in 1895,³ Rzehak figured and described *Pseudotextularia varians*. This species seems to be identical with that later published by Egger as *Guembelina fruticosa*,⁴ and it occurs in the Mendez member of the Upper Cretaceous of Mexico. As will be noted, other species connect the two faunas of Central Europe and Mexico. As shown by Rzehak in 1895 (pl. 7, figures 2 and 3) the early stages of *Pseudotextularia* are truly textularian, an alternating series of chambers on either side of an elongate axis, the apertures on the inner margin of newly added chambers. In the adult there occur isolated chambers near the periphery, subglobular in form, finally resulting in a spiral series about the margin, leaving a depressed area in the center. Well preserved Mexican specimens show this same series of characters. There are specimens, however, which do not attain this full generic character, and as figured by Rzehak (1895, plate 7, figure 1) still hold the textularian form. The ornamentation and general appearance are very similar in the two forms, however.

¹ EGGER. *Foraminiferen aus den Kreidemergeln der Oberbayerischen Alpen*. Abh. kon. bay. Akad. Wiss. München, Cl. II, vol. 21, 1899.

² RZEHAK. Verh. Nat. Ver. Brünn, Sitz, 24: 8. 1886.

³ RZEHAK. Ann. k. k. Nathist. Hofmuseums 102: 217, pl. 7, figs. 1-3. 1895.

⁴ EGGER, loc. cit., pl. 14, figs. 8, 9.

The Mexican specimens from the Mendez formation, which is the upper part of the so-called Papagallos of the Upper Cretaceous of Mexico, seem to be identical with *Pseudotextularia varians* Rzehak. Turning to Egger's 1899 work, it will be found that plate 14 has a very similar form which seems identical, figures 8 and 9, which are described as a new species, *Guembelina fruticosa* Egger. From a study of Mexican material this seems to be a synonym of *Pseudotextularia varians* Rzehak, and does not belong in the genus *Guembelina* erected by Egger.

Also in the Mendez is another species, much flattened and developing the multiple chambers very early, and finally in great numbers. This, without an opportunity of seeing the European types, would seem at least very close to, if not identical with, Egger's plate 14, figures 17, 18, 20, 21, described by him as *Guembelina acervulinoides* Egger. This should be known as ***Pseudotextularia acervulinoides*** (Egger).

Apparently *Pseudotextularia* is one of those genera which represents an end development, and did not persist into the Tertiary to any extent. The two species of the Mendez serve as do many others to correlate the Upper Cretaceous of Mexico and Central Europe.

Guembelina Egger, 1899

In 1899 Egger erected the genus *Guembelina* which included certain species already discussed. The typical species, however, have a spiral or bulimine early development followed by a textularian series of chambers. A typical species is *Guembelina decurrens* (Chapman) figured by Egger (plate 14, figures 1 to 4). This has a peculiar surface ornamentation of curved costae, those of each chamber independent of the others, and in general parallel to the periphery. Associated with *Pseudotextularia varians* in the Mendez is a species of *Guembelina* which is probably identical with *G. decurrens* (Chapman), still further showing the relationship of this Cretaceous of Mexico and that of Central Europe.

The genus *Guembelina*, like *Pseudotextularia*, does not seem to have persisted to any extent into the Tertiary, and the two make excellent markers for this part of the Upper Cretaceous over this wide geographical range.

PROCEEDINGS OF THE ACADEMY AND AFFILIATED SOCIETIES

THE ANTHROPOLOGICAL SOCIETY

584TH MEETING

The 584th meeting of the Anthropological Society of Washington was held October 21, 1924, in the new National Museum and was devoted to a symposium on *The anthropology of the Southeastern United States*.